

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT
(PCT Article 18 and Rules 43 and 44)

| | | |
|---|---|---|
| Applicant's or agent's file reference 008998-0014 | FOR FURTHER ACTION | see Form PCT/ISA/220 as well as, where applicable, item 5 below |
| International application No. PCT/CA2005/000005 | International filing date (<i>day/month/year</i>) 06 January 2005 (06-01-2005) | Priority date (<i>day/month/year</i>) 07 January 2004 (07-01-2004) |
| Applicant ALSTOM CANADA INC. ET AL | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II).

3. ☐ Unity of invention is lacking (see Box No. III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows :

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 5

☐ as suggested by the applicant.

☐ as selected by this authority, because the applicant failed to suggest a figure.

☒ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2005/000005

A. CLASSIFICATION OF SUBJECT MATTER

IPC⁷ H03H-11/02, H04L-12/28, H04L-12/02, H04L-29/02, H04L-5/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷ H03H, H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)

Databases: Canadian Patent Database, Delphion, Pluspat, IEEEExplore, Google

Keywords: analog, front-end, homepna, hpna, transformer, coupling, amplifier, filter, common mode, attenuator, two-conductor, train, car, railway, transit.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No(s). |
|-----------|--|--------------------------|
| A | US 6,212,263 B1 (Sun et al.) 03 Apr. 2001 (03-04-2001) **Fig. 6; col. 7, lines 5-37** | 1-24 |
| A | US 2003/0211782 A1 (Esparaz et al.) 13 Nov. 2003 (13-11-2003) **Fig. 11; paragraph [0035]** | 1-24 |
| A | Product Data Sheet - Homelan Magnetics 10Mbps Filter Modules http://www.belfuse.com/Data/DBObject/LM00100.pdf (Copyright 2001) | 1-24 |
| A | Product Data Sheet - Home Phone Networking Magnetic Module http://www.pca.com/datasheets/EPB5047AS.pdf (Copyright 2000) | 1-24 |
| A | EP 1 265 442 A1 (Fuster Rutilanchas et al.) 11 Dec. 2002 (11-12-2002) **Entire document** | 14-24 |
| A | WO 98/51081 (Blair) 12 Nov. 1998 (12-11-1998) **Entire document** | 14-24 |

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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|----------|--|-----|--|
| * "A" | Special categories of cited documents : document defining the general state of the art which is not considered to be of particular relevance | "T" | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "E" | earlier application or patent but published on or after the international filing date | "X" | document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "L" | document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "Y" | document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "O" | document referring to an oral disclosure, use, exhibition or other means | "&" | document member of the same patent family |
| "P" | document published prior to the international filing date but later than the priority date claimed | | |

Date of the actual completion of the international search

08 March 2005 (08-03-2005)

Date of mailing of the international search report

29 March 2005 (29-03-2005)

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CA2005/000005

| Patent Document Cited in Search Report | Publication Date | Patent Family Member(s) | Publication Date |
|---|---------------------|----------------------------|---------------------|
| US6212263 | 03-04-2001 | US6212263 B1 | 03-04-2001 |
| US2003211782 | 13-11-2003 | US2003211782 A1 | 13-11-2003 |
| EP1265442 | 11-12-2002 | EP1265442 A1 | 11-12-2002 |
| | | ES2187351 A1 | 01-06-2003 |
| | | US2002186670 A1 | 12-12-2002 |
| WO9851081 | 12-11-1998 | AU7419498 A | 27-11-1998 |
| | | CA2286794 A1 | 12-11-1998 |
| | | GB2339992 A | 09-02-2000 |
| | | US6700602 B1 | 02-03-2004 |
| | | US2004227812 A1 | 18-11-2004 |
| | | WO9851081 A1 | 12-11-1998 |